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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,436	08/01/2003	Michael F. Thomashow	MSU-10661	3828
23535 7590 04/30/2009 MEDLEN & CARROLL, LLP 101 HOWARD STREET SUITE 350 SAN FRANCISCO, CA 94105				
EXAMINER				
KUMAR, VINOD				
ART UNIT		PAPER NUMBER		
1638				
MAIL DATE		DELIVERY MODE		
04/30/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/632,436

Applicant(s)

THOMASHOW ET AL.

Examiner

VINOD KUMAR

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9, 11, 17, 20-24 and 27-37 is/are pending in the application.
- 4a) Of the above claim(s) 9, 11 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-24 and 27-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/01/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Objections and Rejections

1. Applicant's response filed in the paper of 1/12/09 is entered.
2. Claims 9, 11, 17, 20-24 and 27-31 and newly added claims 32-37 are pending.
3. Claims 1-8, 10, 12-16, 18-19 and 25-26 are canceled.
4. Claims 9, 11 and 17 have been withdrawn.
5. Newly added claims 32-37 fall within the scope of elected invention. Accordingly, claims 20-24, 27-31 and newly added claims 32-37 are examined on merits in the present Office action.
6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

7. Claims 9, 11, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 30, 2005. The restriction was made FINAL in the Office action mailed on November 4, 2005.

This application contains claims 9, 11, and 17 drawn to an invention nonelected with traverse in the reply filed on August 30, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

8. Claims 20-24, 27-31 and newly added claims 32-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection has been necessitated due to the claim amendment filed in the paper of 1/12/09.

Claim 32 recites the limitation "said expression product" in line 2 of part d). There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites the limitation "said expression product" in line 2 of part d). There is insufficient antecedent basis for this limitation in the claim.

Dependent claims 20-24 and 27-31 are also rejected because they fail to overcome the deficiency of parent claims.

9. Claims 20-24, 27-31 and newly added claims 32-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such

a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 32 and 34 recite "expression product stimulates a higher expression" which introduces **NEW MATTER** into amended claims. The specification does not provide written description support for the phrase "expression product stimulates a higher expression". This does not comply with written description requirements.

Claims 33, 35, 36 and 37 recite "increased at least 2-fold within 24 hours of such exposure" which introduces **NEW MATTER** into amended claims. The specification does not provide written description support for the phrase "increased at least 2-fold within 24 hours of such exposure". This does not comply with written description requirements.

Dependent claims are also rejected because they fail to overcome the deficiency of parent claims.

Claim Rejections - 35 USC § 102

10. Claims 20-24, 27-31 remain and newly added claims 32-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Harper et al. (United States Patent Publication 2002/0160378; filed August 24, 2001) taken with the evidence of Kagaya et al. (Nucleic Acids Research, 27:470-478, 1999) for the reasons of record stated in the Office action mailed on 10/10/2008.

Applicant argues that inherency argument seems to hinge, in part, on the assumption that Applicant's methods in here in the composition disclosed as SEQ ID NO: 2316 in Harper et al. Applicant further argues that their claimed invention presents

new uses of existing product, which are indeed patentable subject matter. Applicant continues to argue that Harper et al. do not disclose the concept of employing SEQ ID NO: 2316 to up-regulate or down-regulate the expression of cold regulatory genes or drought regulatory genes in a plant. Applicant further argues that Harper et al. do not teach the method steps of claims 32 and 34 (response, paragraph bridging pages 7 and 8).

Applicant's arguments are carefully considered but are deemed to be unpersuasive.

It is maintained that Harper et al. disclose a transgenic plant and a method of producing said plant comprising transforming a plant cell or plant with a DNA expression cassette comprising a promoter (constitutive, inducible or tissue-specific) operably linked to a coding sequence of SEQ ID NO: 2316 (encoding a DNA binding protein RAV1) which has 100% sequence identity to instant SEQ ID NO: 1. The reference further discloses that over-expression of SEQ ID NO: 2316 induces stress tolerance in said transgenic plant, and wherein said stress includes freezing, drought and other types of environmental stresses. Furthermore, reference also discloses method steps of selecting or screening transgenic plants comprising SEQ ID NO: 2316 with improved abiotic stress tolerance for cold or dehydration. See in particular, page 2, paragraph 0012 and 0017; page 3, paragraph 0020; page 7; paragraph 0039; page 12, paragraph 0067; page 13, paragraph 0079; page 18, paragraph 0109. Also see in particular, page 5, paragraph 0031, page 10, paragraph 0054. Also see claims 29, 33, 35, 46, 47, 49, 51, 52, 53 and 55.

Furthermore, Harper et al. also disclose plant cells or tissues susceptible to infection with *Agrobacterium tumefaciens* that contain and express a chimeric gene comprising a promoter operably linked to SEQ ID No: 2316 which has 100% sequence identity to instant SEQ ID NO: 1. See page 24 and paragraph 0145.

The property of binding to a CAACA sequence is inherent to the sequence taught by Harper et al., as evidenced by Kagaya et al. (page 478, first and second paragraph). It is this inherent property that regulates the expression of cold and/or drought inducible genes. Furthermore, the property of at least 2-fold increase in the expression of said cold and/or drought inducible genes would also be inherent to the expression of SEQ ID NO: 2316 in Harper et al. transgenic plant.

It is also maintained that the property of regulating cold and/or drought genes in a plant is also inherent to Harper et al. method of expressing SEQ ID NO: 2316 (100% identity to instant SEQ ID NO: 1) encoding a transcription regulating protein in a transgenic plant.

As discussed above, it is maintained that the properties of regulating the expression of a drought or cold tolerance gene in a plant are also inherent to Harper et al. method of expressing SEQ ID NO: 2136 in the transgenic plant because the active method steps recited in the instantly claimed methods are structurally identical to the method steps disclosed in Harper et al. method.

Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343,1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior

to the 2-leaf stage. The court held that the preamble phrase "rich in glucosinolates" helps define the claimed invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates").

Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly the rejection is maintained.

Conclusions

11. Claims 20-24, 27-31 remain and newly added claims 32-37 are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod Kumar whose telephone number is (571) 272-4445. The examiner can normally be reached on 8.30 a.m. to 5.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Phuong T. Bui/

Primary Examiner, Art Unit 1638